Community Advisory Council
September 12, 2002
Action Items/Notes

Final

These notes are in the following order:

1. Attendance
2. Correspondence and handouts
3. Quorum
4. Administrative
5. Fire Management Plan, Tim Green and John Searing, BNL
6. Update on Groundwater Treatment Systems, Bob Howe
7. BNL Environmental Research & Technology Presentation, Paul Kalb, Environment Research and Technology
8. Community Comment
9. Carman's River Report, Andy Rapiejko, SCDHS
10. CAC Path Forward on the Tristan Issue
11. Agenda Setting

1. Attendance

Present:
Members – R. Biss, G. Campbell, R. Clipperton, R. Conklin, J. Corrarino, A. Espositio, D. Garber, M. Giacomaro, H. Guthy, J. Heil, A. Jones, J. Jordon-Sweet, M. Shea, D. Sprintzen, T. Talbot, M. Walker.

Alternates – W. Evanzia, A. Graves, B. Henigin, B. Martin, J. McLoughlin, J. Ottney, K. Timmins

Others – P. Bond, A. Carsten, J. Carter, J. Clodius, F. Crescenzo, J. D'Ascoli, K. Geiger, T. Green, K. Grigoletto, L. Hill, R. Hodgin, B. Howe, P. Kalb, T. Kneitel, S. Kumar, M. Losquadro, M. Lynch, V. Racaniello, A. Rapiejko, J. Searing, T. Sheridan, K. White, C. Wirick.

Absent:
Members – R. Amper, M. Barrett, A. Capozzi, M. Cohn, S. Cullen, N. Essel, D. Fischler, E. Kaplan, J. Kassner, J. Mannhaupt, P. Martino, G. Proios, C. Swenson,

Alternates – S. Bail, S. Carlin, K. Crowley, J. Gibbons, T. Guglielmo, L. Jacobson, R. Johannesen, J. Minnasi, J. Pannullo, P. Pizzo, W. Prospect, K. Skinner, P. Stephens

2. Correspondence and Handouts

Items 1 - 9 were mailed with a cover letter dated September 6, 2002. Items 10 - 14 were included in the folders and item 15 was available at the meeting as a handout.

1. Draft agenda for September.
2. A flyer inviting CAC members and alternates to a 4th Anniversary celebration.
3. Draft notes for August.
4. Final notes from June.
5. A copy of the first edition of Science Magazine
6. A copy of an email from Jean Mannhaupt regarding a letter that appeared in the Suffolk Life.

7. Background information on Tristan.
8. Copies of emails from Joe Carson dated August 12, 22, and September 2.
9. An information packet distributed by Joe Carson (for members and alternates not at the August meeting).
10. Copy of a presentation by Bob Howe, Update to the CAC
11. Copy of a presentation by Andrew Rapiejko, SCDHS on the Carmans River.
12. Copies of Letters to the Editor regarding cancer on LI and cleanup at the Lab.
13. Copy of Cleaning Up Groundwater flyer mailed to residents south and southwest of the Lab.
14. Copy of comments by NEAR Consultant Frank Anastasi on the OU V pilot studies.
15. Copy of a presentation by Paul Kalb, of the Environmental Science Department

3. Quorum

The meeting began at 7:00 p.m. following a social to celebrate the fourth anniversary of the CAC. A quorum was present. Reed went over the draft agenda and the ground rules for the meeting. A quorum is established when 55% of the 28 member organizations (15) are in attendance.

4. Administrative

The following corrections were made to the August 8 notes: page 3, paragraph 6, change Graphic Reactor to Graphite Reactor, on page 4, first paragraph, change Graphic Reactor to Graphite Reactor, and also on page 4 change HRBR to HFBR. The notes were approved with one abstention.

Member Sprintzen asked about the process by which the July meeting was cancelled. He said that he was uncomfortable that the decision was made by the Lab and not by the Council and thinks that the Council should have some provision to participate in such decisions. Reed suggested the Council re-consider the formation of a Steering Committee. Mark Walker said that he recalled giving the Lab the authority to cancel the July or August meeting at the June meeting. The decision was to be based on the whether the presentations were ready or not.

Les Hill, Environmental Management (EM), gave an update on the Draft Feasibility Study, which is currently under review by the Department of Energy. He expects that in the near term EM will be sending the documents to the regulatory agencies for their review and it will then be presented to the CAC for review. He said that they have been considering the feedback from the last CAC meeting and that there will be plenty of time for the CAC to provide additional feedback.

Frank Crescenzo, Acting DOE Area Manager, thanked the CAC for their contributions in the decision-making processes and mentioned several projects specifically including the Peconic River and the accelerated cleanup. Regarding the Letter of Intent for the accelerated cleanup funding for FY03, the letter was sent to Jesse Robison, Environment Restoration (DOE Headquarters), for signature, but it has not been signed yet. It is still being worked through the budget process. He said DOE's budget had not been finalized.

5. Fire Management Plan, Tim Green, Environmental Services Division and John Searing, Emergency Services Division.

Tim Green presented the Fire Management Plan. The Technical Advisory Group (TAG) for the Upton Reserve, which includes representatives from the DEC, U.S. Fish & Wildlife, the Nature Conservancy, and Bob Conklin (CAC), gave a great deal of input. Many of the TAG representatives have vast experience with wildland fires and prescribed fires, which are

addressed in the Plan. He discussed the objectives of the plan, its implementation, public information and education, and safety. He noted that Federal resources were available to fight fires should they be needed and explained the Mutual Aid plan with Suffolk County. He stated that no prescribed fires would take place in radiological areas and that the Laboratory would use existing prevention and public education programs. Green explained the process that would be used in planning for and approving a prescribed fire. He said that he expects it will be submitted shortly for Lab and DOE approval.

CAC members asked questions about the Upton Reserve, how long it would take federal resources to get here, and how often prescribed fire would be used.

6. Update on Groundwater Treatment Systems, Bob Howe

Bob Howe gave an update on the groundwater treatment systems. The Lab is responding to community input on the placement of two systems. There will not be a building at the Puritan Drive location which was in a residential area. Instead the water will be piped to the system at the airport location. Additionally, the Lab is working with Suffolk County to move the North Street system to the east side of North Street. After evaluating the input from community members, these were the preferred alternatives. The 90% designs have been submitted to the regulators, with the exception of the North Street system, which will be submitted in November. System designs cannot be finalized until access issues with landowners are settled. Howe also updated the CAC on actions being taken to address the community's concerns about safety, roads, piping, and the effects of returning cleaned water back into the ground. CAC members asked about the voltage that would be running to the treatment system buildings. Typically there is a 480 volt, 3 phase power service. The exact amps were not known and Howe offered to get back to the CAC with the information. The CAC also asked what the contamination concentrations would be if there were a break in the pipe. It was stated that if the pipe broke and the whole length drained about a thimble full of chemical would leak out. They asked about other radionuclides contaminating the groundwater off-site and on-site. Howe reported that Tritium has been identified along North Street at levels half the drinking water standard. The tritium will get picked up by the treatment system. Howe said that the CAC and the community will be kept updated on our progress.

The OU IV ROD was signed in 1996. An air-sparging system was put in place to address contamination at the Lab's Central Steam Facility. Once cleanup was considered complete, the system was turned off. Data shows that there is no need to turn it back on and approval is being sought to take the system down. Monitoring will continue. The report is being reviewed by Regulators.

The RAD soil at the Bldg. 650 sump was excavated this past July. The soil will be shipped to an off-site disposal area. When asked, Howe stated he believed that Cesium was in the soil, but he was not sure whether it entered the groundwater beneath the sump or not. He was asked to check and get back to the CAC.

When asked about monitoring results, Howe replied that there was a localized plume of Strontium 90 that does not appear to have migrated very far. He said the concentrations were in the 20 to 30 pc/l range. Howe also talked about the reviews that are performed on the remedies and said that the Five Year Review was conducted in June. It was determined that the remedy has functioned as designed and is protective of human health and the environment.

Action Item: Information on the power used at the off-site treatment facilities.

Action Item: Is there Cesium in the groundwater beneath the 650 Sump Outfall?

Don Garber brought some Brazil nuts to share with the CAC members. He said that they are about 14,000 to 19,000 pico curies per liter and that Brazil nuts are the most radioactive natural food. The key ingredient that makes them radioactive is radium.

David Sprintzen mentioned that Judy Pannullo had taken the position of Executive Director with the Suffolk Community Council. He spoke about the role she played in forming the CAC and noted that she had been with the Progressive Coalition for 13 years. He said that there will be a benefit to honor her on October 7th and that all were welcome to attend. See him for details.

7. BNL Environmental Research & Technology Presentation, Paul Kalb, Environment Research and Technology

Paul Kalb of the Environmental Science Department spoke about the research that his division is working on. The division is multi–disciplinary with chemists, engineers, nuclear chemical engineers, with a broad range of talents and interests. His organization seeks to have an understanding of problems and what can be done through basic science. They then apply that knowledge to real world problems.

Kalb's group has worked to come up with solutions to issues on-site and discussed a process developed to treat Mercury. The mercury is stabilized in sulfur and then encapsulated in a sulfur polymer matrix; which is an effective disposal technique. He also discussed the Department of Energy Accelerated Site Technology Deployment program that encourages the development of innovative technologies to accelerate cleanup. He spoke about four successful Lab projects approved under this program. Kalb showed an example of 3-D visualization which showed the results of a tracer gas that had been pumped into interior ducts at the BGRR and then measured in monitoring ports on the outside. The Tracer Gas Study showed potential leak pathways in the below ground ducts. He also talked about the segregation and characterization of the soil from the chemical/animal holes using a high tech piece of equipment to separate out large nonconforming items. The soil was sampled and analyzed for radioactivity and for toxic metals, primarily mercury. He said the data was generated in minutes instead of weeks and months.

The CAC members asked questions about the encapsulation process for different types of materials, licensing agreements, the depleted uranium encapsulation and safety and security issues regarding the potential of the material's use for terrorist activities. Don Garber suggested a future meeting to expand on the topics focusing on Mercury. Kalb gave his web site if anyone wanted additional information and also said he was available if anyone had questions.

8. Community Comment

There were no comments from the audience.

9. Carman's River Report, Andy Rapiejko, SCDHS

Andy Rapiejko, Hydrogelogist, Suffolk County Department of Health Services, gave a report on the study of the Carman's River. He spoke briefly about how the study came about as a result of legislative action in 1999 and explained that this was one of three projects authorized by County Resolution 168-1999. He said that the scope of the study included evaluating the historic data, identifying potential contaminant sources, developing and executing a sampling plan, assessing the current environmental state of the river, and issuing findings and recommendations. The study began in February 2001 and was completed in March 2002. Brookhaven Nation Laboratory groundwater plumes were a primary focus of the legislation and were included in the study.

Rapiejko described the sources used to collect the historic data and identify the potential sources of contamination. The data was used to show annual mean flow, dissolved chloride, dissolved sodium, temperature, and pH trends. New samples taken were analyzed by SCDHS, Chemtech, NJ, and Brownawell, at SUNY-SB.

Rapiejko reported that gross alpha and beta results for sediment had one sample result of 21 pc/g. Rapiejko said they went back and took four additional sediment samples but the elevated result was not repeated. He said that they would go out again and take another round of samples. A commitment was obtained from the NYSDOH that if the high result was repeated NYS would do an Isotopic analysis to determine if it was from a natural or man-made substance. He said that the overall quality of the water in the river is very good to excellent. Relative to BNL, the study showed no evidence that Laboratory plumes have reached or impacted the Carmans River. The trends that they expect to watch are high coliform attributed to waterfowl, the MTBE detections, soluble salts, and nitrates. Study recommendations included working with Brookhaven Town to preserve the remaining vacant land (22%) in the river basin, continue monitoring, and do further analysis of the database.

CAC members asked questions about the levels of chemicals found in the samples, about the groundwater plumes, the buffer, whether or not fishing is allowed, septic tracers, and if the wet weather sampling would have made a difference in the results. A copy of the full report is available at the Longwood Library.

10. CAC Path Forward on the Tristan Issue

Member Martin stated that if the Tristan experiment itself was misclassified with regard to whether or not it's a nuclear facility, then it's probably true that the Type B investigation was inadequate and it's probably true that the remediation activities were lacking. But Tristan was not classified as a nuclear facility and if that classification is correct, then it appears that both the procedures and the investigation were substantially correct. So if it was misclassified, then Dr. Carson's allegations may have some basis and should be investigated further. The crux of the issue is the definition of the terms "reactor nuclear facility" (RNF) and "non-reactor nuclear facility" (NRNF), which are the only two types of "nuclear facility: that exist. These definitions come from DOE 5480.21, for use with DOE Order 420.1 on facility safety, and are available on the web.

He noted that, while the HFBR reactor vessel is obviously a RNF, as are the reactor operational areas such as fuel-rod storage areas, assembly, and anything that is used to support or moderate nuclear chain reactions, the definition of a RMF odes not encompass the entire contents of the building that encloses the RNF. Light bulbs, air locks, stairwells, and elevators do not automatically become nuclear facilities merely because they are within the same building. In an effort to further explain the classification of the TRISTAN experiment, Martin said that if he walked into the HFBR with a nickel in his pocket the coin would not automatically become either a RNF or a NRNF. Likewise, if he has 5 grams of Uranium 235 in his pocket, (which is probably not wise), that radioactive metal would not become a NRNF merely by being brought into a building that housed a RNF.

The conditions for defining a Non-reactor Nuclear Facility have to do with producing fissionable material in such form and quantity that a nuclear hazard potentially exists. Since 5 grams of U^{235} is not sufficient to produce a potential nuclear hazard, TRISTAN (which contained a radioactive source of approximately that quantity) fails to qualify as either a NRNF or a RNG, and is therefore not a Nuclear Facility. He quoted one part of the definition of Nuclear Facility stating that the "Use of radioactive sources in research and experimental and analytical laboratory activities (electron microscopes and X-ray machines) would not ordinarily be included

in this definition." Dr. Carson's argument seems to hinge on trying to define the TRISTAN experiment as a Nuclear Facility, but Martin concluded that it failed to meet the definition.

Member Guthy added that she thought Tristan was called an experimental station. Member Jordon-Sweet asked for more information because the things that Carson is claiming he wants from DOE are not in any documentation. She noted that it seems that there's not a paper trail of any evidence to support what his claims; if there's more of a paper trail she would like to see it.

Member Shea said she'd like to bring this up when the CAC has adequate time to discuss it at the next meeting since she thought it was a very important issue. She would like to know more and hear from Mike Holland; she doesn't think the CAC should decide the technical merits of the argument since she didn't think the CAC was qualified to do that. But she does think that if someone who is qualified who has been on a review committee, has a problem, that as members of the community, the CAC should know that his concerns will be addressed properly. Member Campbell (?) said he thinks that a distinction between Carson's argument with the DOE and the role of the CAC should be made. He said he had a great deal of difficulty understanding the relevance of what he's talking about and what he is asking from the CAC. Campbell noted the lessons that were learned resulted in changes at the Lab and he didn't see where a further discussion of what happened will lead to improving worker safety at Brookhaven Lab today. He said that he didn't see where it's going except to further Mr. Carson's lawsuit against the DOE and didn't think that was an appropriate role for the CAC.

Member Shea said that Carson was requesting a DPO and she thinks that the CAC should consider that because of the possibilities of worker safety being an issue. In particular she has concern for the firemen who responded. There 11 people who were contaminated, and that the whole building was contaminated. She noted that she is not trying to judge the merits of anything, but that someone who is qualified should have access to people on the top who will listen to him. She said that according to the material the workers would not have been contaminated if different procedures had been in place.

Reed noted there were two issues, one was procedural and the other was safety, which was associated with it.

Member Garber requested bringing the issue to closure at the next meeting. He made a motion that the item be tabled and be put on the agenda for the next meeting, the motion was amended to points 5 & 6 on the memo, there was objection to that as others had issues they wanted to raise but were willing to wait because of the hour. Someone asked that Member Martin's definitions be included in the next mailing.

Member Biss wanted to know what the safety violations actually were, she wanted additional information on the allegations from Carson.

Action Item: Send out definitions on nuclear facilities in mailing.

11. Agenda Setting

OU V – Mercury in sediments (technology & overview of science)
Quarterly environmental update
g-2
Budget update
Nanoscience
Tristan Outcome (put at beginning of agenda)

Meeting adjourned at 10:05 p.m.